

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

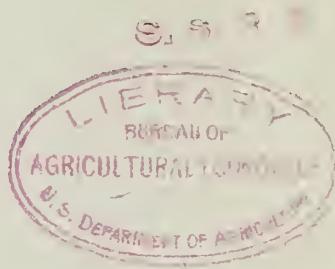
166.3
M68
ro.24
cop.2

FARM CREDIT ADMINISTRATION
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FROZEN-FOOD LOCKER PLANTS
IN THE UNITED STATES

166.3
M68
ro.24 cop.2
APR 22 1941

By
S. T. WARRINGTON



COOPERATIVE RESEARCH AND SERVICE DIVISION

Miscellaneous Report No. 24

October 1940

INV. '60

FARM CREDIT ADMINISTRATION

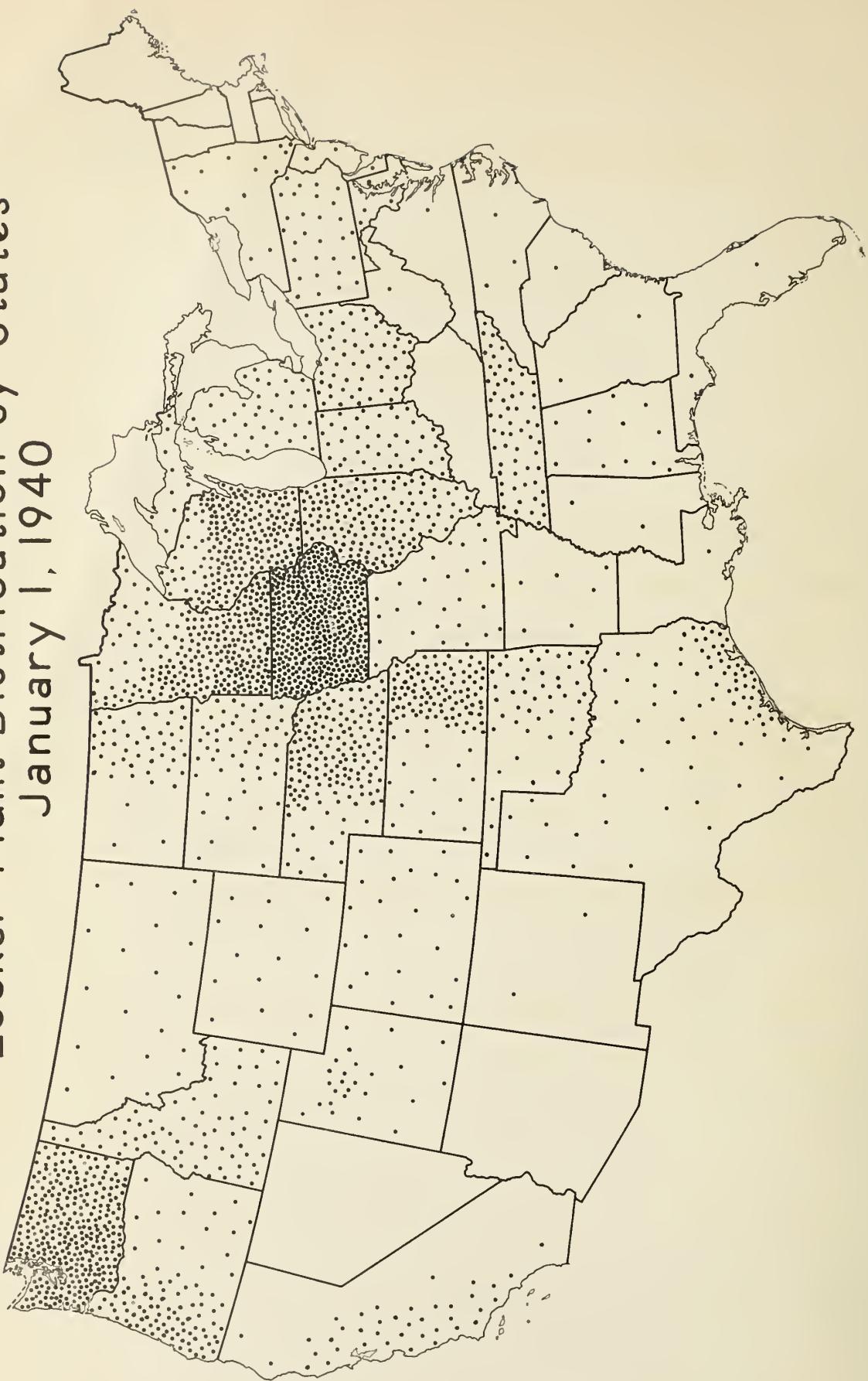
A. G. Black - Governor

COOPERATIVE RESEARCH AND SERVICE DIVISION

T. G. Stitts - Chief

W. W. Fetrow - Associate Chief

Locker Plant Distribution by States
January 1, 1940



FROZEN-FOOD LOCKER PLANTS IN THE UNITED STATES

By

S. T. Warrington
Associate Agricultural Economist

C O N T E N T S

	<u>Page</u>
Summary.....	1
Pasis for rapid growth of the locker industry.....	3
Nature and scope of the survey.....	6
Plant capacity and percentage rented, by States and years.....	6
Number of frozen-food locker plants, average capacity, and percentage of capacity rented, by sections, affiliation, and year opened.....	12
Plant capacity and rentals, by ownership and year opened.....	15
Town patronage of locker plants by location, size of town, and age of plants.....	18
Locker rental rates.....	21
Charges for cutting, wrapping, and freezing services.....	23
Miscellaneous service charges.....	24

SUMMARY

Individual frozen-food lockers for preserving perishable foods at low temperatures were used first in Nebraska some 25 years ago and in the Pacific Northwest as early as 1920. They became generally popular after 1930 when plants offering more or less complete related services were introduced. Farm families and residents of small towns and villages readily accepted this means of increasing the year around variety and improving the palatability of foods for table use, especially where such foods were locally produced. By January 1, 1940, an estimated 2,500 frozen-food locker plants, representing an investment of more than \$25,000,000, were operating in the United States. Leading States in number of plants were Iowa, 453; Washington, 313; Minnesota, 263; and Wisconsin, 217. Considerable expansion was taking place in the South Central and Western States and some in the States along the Atlantic Coast.

Through a survey made by the Cooperative Research and Service Division of the Farm Credit Administration, in cooperation with the agricultural colleges, the locker associations and operators in 1940, capacity and rental statistics were assembled on 1,160 of these plants. Of this number, 85 percent had been opened since 1935 and 60 percent since 1937. Seventy-three percent of the plants reporting were in the North Central States and 20 percent in the Western States.

The 1,160 plants reporting had an average capacity for 330 lockers. On January 1, 1940, 64 percent of these lockers were rented. Applied to the estimated 2,500 locker plants in operation, these figures indicate a capacity for over 800,000 lockers, with more than 500,000 lockers in use.

Operation of locker departments by creamery, milk, ice, and ice-cream plants has declined in relative importance in this field from 64 percent of the plants during 1935 to 41 percent on January 1, 1940. Locker plants operated by retail stores and as separate enterprises increased from 24 to 49 percent during the same period.

In general, recently established locker plants are smaller. This is largely because the proportion of small locker units opened by retail meat and grocery stores is increasing and to a lesser extent because plants are being installed in smaller towns. Plants independent of any other enterprise were largest, having an average capacity of 431 lockers. Ice and ice-cream company locker plants were next with 406 lockers. Plants set up by retail stores and meat markets were smallest, with average capacity of 231 lockers.

Success in renting lockers seems to be closely related to the conditions under which the plants are opened. For example, those plants opened as separate units during 1935 and earlier, 1937, and 1938 had a larger percentage of their lockers rented on January 1, 1940 than those opened in connection with other enterprises during these same years; while locker units opened by creameries and milk plants during 1936 and 1939 had a larger percentage of lockers rented than any other group.

Approximately one-half of all the plants reporting were owned by individuals, 22 percent by commercial corporations, 16 percent by partnerships, and 14 percent by cooperatives. Corporate ownership declined in importance, and the other three groups increased during the years 1935-39.

Plants owned by corporations were largest, with an average capacity for 450 lockers. Cooperative plants were next in size with an average capacity for 359 lockers, and individually owned plants were smallest with an average of 255 lockers. There was no distinct trend toward larger or smaller plants among those opened since 1935 by cooperatives or other corporations; whereas the trend among those opened by individuals and partnerships was toward smaller plants.

Cooperatively owned plants opened during 1935 and earlier, in 1936 and in 1939 had larger percentages of their lockers rented than plants opened during the same years under other types of ownership. Those owned by partnerships led among the plants opened during 1937 and 1938.

One-fourth of the patrons in the 773 plants reporting on this item were from towns. Town families were least important in the North Central States, where they made up 21.7 percent of the total patrons, whereas they represented 34.4 percent of the total in the West and 44 percent in the South.

Seventy percent of the plants in the North Central and Western States and only 47 percent of those in the Southern States were in towns of less than 5,000 population.

The most common locker-rental rate for a bottom drawer was \$12 per year, while a third-row door rented for \$10 in 65 percent of the plants covered by the study.

Charges for cutting, wrapping, and freezing service were reported by 930 plants. Fifty-six percent charged 1 cent per pound and 29 percent charged 1-1/2 cents. Such service was not offered by 140 of the plants.

Forty-three percent of the plants reporting did curing and smoking. One-third of the plants providing this service charged 3 cents per pound, a similar proportion charged 4 cents, and 16 percent charged 5 cents per pound.

Only one-third of the locker plants rendered lard for their patrons. Of these, 33 percent charged 2 cents per pound (rendered weight basis) and 25 percent charged 3 cents per pound.

Only 56 plants reported slaughtering facilities at the plant; whereas, 506 or about 40 percent of the plants reported charges for slaughtering on the farm. The most frequent charge for slaughtering hogs of average weight on the farm was \$1 per head. One-third of the plants charged \$1.50, and one-sixth charged \$1.25. The usual charge for the average beef was \$1.50 per head, but 20 percent of the plants charged \$2. Mileage was frequently added to these rates and charges for the heavier animals were higher.

Only one-fourth of the plants reported charges for processing fruits and vegetables. The limited number reporting such charges may result from the fact that until recent years satisfactory processing techniques were not widely known. Also, some operators make no charge for freezing items packed in the home. Further, consumers in many communities were not producing, and possibly could not produce, the kinds and varieties which were adapted to freezing. Under such circumstances, locker operators may buy commercial packs for their patrons.

In general, the locker-plant system of food processing and distribution, if properly organized and well operated, may be beneficial to its patrons chiefly in two ways: First, it may encourage greater production and use of home-grown foodstuffs. This should improve and stabilize the diets of these families, particularly in periods of depression; second, it may lower the cost of distribution and hence increase the consumption of some foods, particularly fresh meats and certain frozen fruits and vegetables. Consequently, careful analysis of the experience in this industry and intelligent planning for its future should prove extremely worth while for those interested in the more extensive use of frozen-food lockers.

Basis for Rapid Growth of the Locker Industry

Frozen-food lockers for the use of individual families have been used in Nebraska more than 25 years. Following the first World War, numerous creameries and ice plants in the Pacific Northwest installed lockers in low-temperature rooms for the use of their patrons. Yet it is doubtful if more than 50 plants in the United States provided such service prior to 1930 and these were confined to the Pacific Northwest and the western part of the Corn Belt. The movement spread rapidly after 1930, particularly during the years 1935-39. On January 1, 1940, it is estimated that 2,500 frozen-food

locker plants were in operation in a total of 38 States. Iowa, Washington, Minnesota, and Wisconsin were leading States with 453, 313, 263, and 217 plants respectively.

Of the 50 plants operating prior to 1930, almost none provided services other than storage. The modern locker plant with its chilling, cutting, wrapping, grinding, and sharp-freezing facilities is a product of the next decade. In fact, 85 percent of the locker plants operating on January 1, 1940, have been opened since 1935. Thus, most of the locker plants operating today provide, in addition to the lockers, a chilling and aging room, which is held around 35° F; a sharp freezer, with temperatures ranging from Zero to 40° below; and cutting, grinding, and wrapping service at the plant. Many plants also furnish other services such as lard rendering, curing, smoking, slaughtering, sausage making, and fruit and vegetable processing (see tables 14 and 15).

The rapid growth of this industry results, to a large extent, from the popularity of lockers among users. This popularity is in turn founded on a number of fundamental advantages which vary according to the type and size of families, their income level and the convenience and cost of supplies of foods to be stored.

To clarify the discussion of locker-plant use and its possibilities, the patrons of these plants are classified into three groups: (1) Those families who can not grow or buy locally at farm prices the products which they would store in the locker; (2) those families who have been buying at retail products which they now grow or can buy locally at farm prices; and (3) those families who have been processing in the home products which they grow or can buy locally at farm prices. This grouping is admittedly arbitrary, for many families may use the locker not only for products that can be grown locally but also for those products which must be brought from distant producing sections.

For those families in group 1 who can not buy satisfactory locally produced meats, the locker system may offer one or all of the following possibilities: (1) They may obtain a quality or grade of meat which the retailer could not afford to handle for them; (2) they may obtain the same quality or grade of meat at a lower cost; (3) they may secure greater uniformity in the cooking qualities of meat used from week to week; and (4) they are able to see and become better acquainted with the different grades of meat. These advantages over retailing accrue from the fact that the locker system of handling meats combines wholesale merchandising, more efficient cutting, and the self-service principles.

On the other hand, retailing enjoys the following advantages over the locker system, especially for certain families in group 1: First, a family does not have to advance the relatively large

amount of cash required to purchase the wholesale cuts; second, the patron does not have to purchase and, in time, use the wide variety of cuts; and third, meat may be delivered with groceries by the retailer. Retailers may further minimize the advantages of the locker system for this group by shifting to the practice of merchandising graded and labeled cuts through frozen-food cabinets. Locker use by this group, made up largely of families in large towns and cities, is very small yet and the future expansion of locker service for them will depend upon the relative weight given each of the above factors.

Use of lockers for fruits and vegetables may enable the families in group 1 to purchase frozen fruits and vegetables which might not otherwise be available in their communities. Also, they may purchase these products in quantity through their locker plant at lower-than-retail prices.

To the families in group 2, those who have been purchasing at retail products which they could grow or buy locally at farm prices, the locker has much more to offer than to those in group 1. This group may have any one or all the advantages of group 1 over the retail system, in addition to savings in transportation and handling charges from the producer to the retailer. It seems logical, therefore, for families in this group to utilize locker service more readily than those in group 1, who are further removed from the farm supply. Groups of rural and urban families located in and around villages and small cities, particularly those in the diversified farming areas, make up a sizable proportion of the estimated half-million families using lockers on January 1, 1940.

The families in group 3, who have been processing in the home products which they could grow or buy locally at farm prices, felt they could not afford to pay the costs involved in marketing, transportation, processing, wholesaling, and retailing the major part of their food supply. A large proportion of the farm families and a number of small-town families fall in this group, particularly in the diversified farming areas. Obviously, this group is most interested in the advantages of the locker system over home processing, in the cost of the service, and to a lesser extent in its advantages over retail purchasing.

Families in this group weigh the disadvantages of greater cost and the inconvenience of getting meats from the locker against the advantages of the locker system for preserving certain items of their food supply. These advantages include greater variety and palatability in the food supply throughout the year, improved methods of cutting and preparing meats, and elimination of the drudgery of home processing and of losses in home storage. Though a rather large number of families in this group are now using lockers, the proportion is relatively small.

Nature and Scope of the Survey

As a result of the wide interest in the possibilities of frozen-food locker plants, the Cooperative Research and Service Division of the Farm Credit Administration, with the cooperation of the colleges of agriculture, the National Frozen Food Locker Association, State locker associations, and individual locker-plant operators, made a survey of the locker plants operating on January 1, 1940. In this survey a single-page questionnaire was sent to a tentative mailing list of 2,556 locker plants. Of the 1,500 schedules returned, 1,200 questionnaires were sufficiently complete for tabulation. This discussion is based on the information so obtained from these reports, and is summarized and analyzed with comments on a few of the more significant facts.

Plant Capacity and Percentage Rented, by States and Years

The numbers of plants reporting both capacity and rentals from each State appear in table 1, by year of opening. To the extent that the reporting plants measure the yearly expansion for all plants, it will be found that Iowa reached its peak construction activity in 1937, and Ohio, Illinois, and Minnesota in 1938.

This table also indicates that the North Central States, with 73 percent of the plants in the United States, have had by far the greatest development in this field. This may be the result of two factors, most important of which is the density of the farm-and meat-animal population and, to a lesser extent, the type of farming and the relative stability of farm income. Further support for these assumptions may be found in the figures which reveal that within the area Iowa, Minnesota, and Wisconsin led in the number of plants operating as of January 1, 1940.

Table 2, which shows the average locker capacity of plants in each State by year opened, reveals that there has been a general decrease in the average size of plants from 1935 through 1939. However, this does not hold true for individual States. In Wisconsin, for example, the size increased from an average of 217 lockers in plants opened during 1937 to 273 in plants opened during 1939.

The downward trend in plant size, most evident in the North Central States, would seem to be the result of two factors: First, the large number of small plants opened by retail meat and grocery stores during 1937, 1938, and 1939 (see table 5); and second, the fact that the earlier locker plants were opened in the larger trading centers. Plants are largest in Ohio, Indiana, Illinois, and Michigan. No doubt, the later development in this area with its concentration of plants in larger trading centers is again a factor; however, of greater importance, is the fact that a larger percentage of the plants in these States are specializing in locker-plant operation with no affiliated enterprise.

Table 3 indicates the percentage of locker capacity rented by States and by year opened. Because fixed costs are a relatively large proportion of the total, utilization of capacity is the most important single factor determining the financial success of the locker enterprise. Hence, a comparison of rental figures is useful in measuring the relative success of locker plants.

In making such comparisons, however, it is essential that the age and capacity of plants, particularly the age, be kept in mind. Thus, a comparison of the rental situation on January 1, 1940, in the plants opened during 1939 which had operated on an average only 6 months, with plants opened in 1938 which had operated an average of 18 months, is obviously unfair. This is particularly true in those areas where locker-plant use is unfamiliar to people in the community.

With this fact in mind, we may note in table 3 that the average percentage of lockers rented on January 1, 1940, by plants opened in the North Central States during 1935 and earlier and during the next 4 years was:

	<u>Percent</u>
1935 and earlier	65.6
1936	66.0
1937	66.4
1938	68.7
1939	49.1

In the Western States the percentage of locker capacity rented by plants opened in these years was:

	<u>Percent</u>
1935 and earlier	79.4
1936	84.3
1937	86.3
1938	72.9
1939	49.4

Apparently, the plants in the Western States have been more successful in renting lockers than those in the North Central States.

The variations between years in the percentage rented are probably the result of two factors; differences in plant capacity and in type of service rendered. The 1938 plants in the North Central States and the 1937 plants in the Western States, which had the highest percentages rented, probably benefited from the mistakes made by plants opened earlier. It should be remembered though that the 1939 plants had been in operation only six months.

The percentage of lockers rented varies widely between States within regions and years (table 3). In the North Central States we find that the Missouri plants opened during 1938 had only 40.7 percent of their lockers rented on January 1, 1940; whereas, the plants in Minnesota opened during the same year had 74.4 percent rented. Among the 1937 plants, Missouri was again low with 42.0 percent rented, while Wisconsin led the group in that section with 81.1 percent rented. In the Western States a similar variation occurs. Colorado plants opened during 1938 had only 40.4 percent of their capacity rented, whereas the Idaho plants opened the same year had 88.7 percent of their capacity rented. The 28 plants reporting from Oklahoma in the South Central division had an average of 59.3 percent rented. This was higher than the average for Missouri, Kansas, or Nebraska. Pennsylvania, the only Eastern State from which a number of plants reported, had a larger percentage of lockers rented than the average for the North Central Division. We might assume, therefore, that locker plant use will expand in some eastern States during the next few years.

Two generalizations may be drawn from the data in tables 2 and 3: First, the older plants, even though they average larger than those opened during 1938 and 1939, have as large a percentage of their lockers rented, indicating that they have been able to hold their patronage through their 3, 4, or more years of operation. To the extent that this represents continued use by a large proportion of the patrons, it indicates the prospect of permanence in this new method of food processing and preservation and its value to the estimated 500,000 families using lockers on January 1, 1940. Second, locker plants in the Plains States have, on the whole, been less successful in renting lockers than those in other areas. This may be due to a depleted livestock population, drouth and the resulting shortage of funds among farmers, or to errors in planning and operating locker plants.

Table 1.- Number of Frozen-Food Locker Plants Reporting, by States and by Years When Opened

Geographic Division and State	1935 and prior	Plants opened in -				Total
		1936	1937	1938	1939	
<u>North Central States</u>						
Ohio	1	1	4	13	10	29
Indiana	-	-	2	9	11	22
Illinois	-	3	13	33	21	70
Michigan	-	-	2	7	13	22
Wisconsin	3	5	12	31	32	83
Minnesota	4	7	36	88	75	210
Iowa	20	24	66	52	39	201
Missouri	2	2	3	1	6	14
North Dakota	2	1	3	11	7	24
South Dakota	-	2	4	7	11	24
Nebraska	16	10	12	17	20	75
Kansas	18	9	16	13	13	69
Total	66	64	173	282	258	843
<u>Western States</u>						
Montana	-	1	1	3	3	8
Idaho	10	8	3	3	3	27
Wyoming	1	2	1	3	2	9
Colorado	3	1	1	1	4	10
Arizona	-	-	-	-	1	1
Utah	1	-	2	2	4	9
Washington	41	13	22	22	24	122
Oregon	8	6	-	8	14	36
California	2	3	1	5	3	14
Total	66	34	31	47	58	236
<u>South Central States</u>						
Tennessee	-	-	1	-	6	7
Alabama	-	-	-	-	4	4
Arkansas	1	-	-	-	5	6
Oklahoma	4	3	9	8	4	28
Texas	-	-	-	2	8	10
Total	5	3	10	10	27	55
<u>North Atlantic States</u>						
New York	-	-	-	-	2	2
New Jersey	-	-	-	-	1	1
Pennsylvania	7	1	1	6	9	20
Total	3	1	1	6	12	23
<u>South Atlantic States</u>						
Maryland	-	-	-	-	2	2
Florida	-	-	-	-	1	1
Total	-	-	-	-	3	3
United States	140	102	215	345	358	1,160

Source of data: Survey made by the Cooperative Research and Service Division, Farm Credit Administration, 1940.

Table 2.- Average Capacity of 1,160 Frozen-Food Locker Plants, by States and Years When Opened

Geographic Division and State	Average capacity of plants opened in -					Average Lockers
	1935 and prior	1936	1937	1938	1939	
	Lockers	Lockers	Lockers	Lockers	Lockers	
<u>North Central States</u>						
Ohio	230	1,000	729	482	414	502
Indiana	-	-	470	507	439	469
Illinois	-	257	415	345	402	371
Michigan	-	-	500	346	341	357
Wisconsin	312	254	217	243	273	254
Minnesota	516	417	325	287	225	280
Iowa	463	387	370	294	262	341
Missouri	475	306	260	540	307	337
North Dakota	443	250	328	239	182	251
South Dakota	-	480	320	269	192	260
Nebraska	433	337	310	218	179	284
Kansas	328	379	370	481	237	337
Total	412	372	356	306	270	319
<u>Western States</u>						
Montana	-	146	370	230	277	254
Idaho	379	238	280	207	216	289
Wyoming	140	225	192	203	119	181
Colorado	330	500	205	240	531	406
Arizona	-	-	-	-	550	550
Utah	1,000	-	417	438	397	478
Washington	442	251	350	333	307	359
Oregon	489	367	-	329	352	380
California	223	280	180	200	433	269
Total	437	274	333	298	338	346
<u>South Central States</u>						
Tennessee	-	-	300	-	534	501
Alabama	-	-	-	-	208	208
Arkansas	200	-	-	-	312	293
Oklahoma	154	420	355	244	375	304
Texas	-	-	-	362	416	405
Total	164	420	349	268	386	340
<u>North Atlantic States</u>						
New York	-	-	-	-	372	372
New Jersey	-	-	-	-	500	500
Pennsylvania	921	1,318	560	516	408	570
Total	921	1,318	560	516	410	550
<u>South Atlantic States</u>						
Maryland	-	-	-	-	350	350
Florida	-	-	-	-	300	300
Total	-	-	-	-	333	333
United States	426	350	354	308	295	330

Table 3.- Percentage of Capacity Rented on January 1, 1940, by 1,160 Frozen-Food Locker Plants, by States and Years When Plants Were Opened

Geographic Division and State	Percentage of capacity rented by plants opened in -					Average Percent
	1935 and prior	1936	1937	1938	1939	
	Percent	Percent	Percent	Percent	Percent	
<u>North Central States</u>						
Ohio	76.5	18.0	52.6	63.6	42.0	52.3
Indiana	-	-	74.5	73.0	34.4	55.1
Illinois	-	79.2	75.0	73.7	48.1	65.8
Michigan	-	-	46.0	54.3	36.6	43.2
Wisconsin	87.7	73.5	81.1	71.3	43.0	63.7
Minnesota	81.9	84.9	75.1	74.4	57.7	70.5
Iowa	67.2	72.3	68.7	67.2	52.4	66.2
Missouri	86.0	58.0	42.0	40.7	41.7	52.7
North Dakota	42.9	48.0	73.4	71.9	55.9	63.5
South Dakota	-	76.0	73.7	65.0	52.5	64.2
Nebraska	52.6	51.5	51.9	58.5	52.3	53.3
Kansas	58.9	55.2	43.7	48.8	43.6	52.9
Total	55.6	66.0	66.4	68.7	49.1	62.6
<u>Western States</u>						
Montana	-	92.5	81.1	74.7	26.6	57.5
Idaho	80.8	90.2	87.6	88.7	40.3	81.1
Wyoming	14.3	73.3	100.0	78.2	52.5	70.2
Colorado	78.8	100.0	61.0	40.4	45.4	60.8
Arizona	-	-	-	-	54.5	54.5
Utah	49.5	-	95.3	81.0	83.8	79.3
Washington	84.2	81.7	85.6	79.5	43.6	77.5
Oregon	69.9	85.1	-	53.6	49.0	61.7
California	49.1	73.9	88.9	61.5	30.4	53.4
Total	79.4	84.3	86.3	72.9	49.4	72.5
<u>South Central States</u>						
Tennessee	-	-	84.0	-	38.8	42.6
Alabama	-	-	-	-	52.3	52.3
Arkansas	24.0	-	-	-	39.4	37.7
Oklahoma	67.6	61.1	62.1	58.6	49.1	59.3
Texas	-	-	-	74.4	50.7	55.0
Total	57.0	61.1	64.0	62.9	45.2	52.9
<u>North Atlantic States</u>						
New York	-	-	-	-	12.8	12.8
New Jersey	-	-	-	-	10.0	10.0
Pennsylvania	77.8	81.1	100.0	61.7	41.5	63.2
Total	77.8	81.1	100.0	61.7	33.9	58.1
<u>South Atlantic States</u>						
Maryland	-	-	-	-	57.1	57.1
Florida	-	-	-	-	26.7	26.7
Total	-	-	-	-	48.0	48.0
<u>United States</u>	72.7	71.1	69.2	68.9	48.1	64.0

Number of Frozen-Food Locker Plants, Average Capacity, and
Percentage of Capacity Rented, by Sections, Affili-
ation, and Year Opened

The plants surveyed are shown in table 4 grouped according to location, affiliated enterprise, if any, and year opened. The data on plants reporting from the South Central, North Atlantic, and South Atlantic divisions are not shown separately because the size of the sample was considered inadequate. However, these data were incorporated into the averages for the country as a whole.

In the North Central States the creameries and poultry and milk plants, along with the ice and ice-cream plants, were the first to enter this field, but they have declined in relative importance during recent years. To a lesser extent, the same holds true in the Western States. Thus, whereas creameries and milk plants owned 34 percent of all locker plants reported as operating in the United States during 1935, they were operating only 23 percent of all the plants reporting on January 1, 1940. Similarly, ice and ice-cream plants declined from 30 to 18 percent.

On the other hand, meat markets, which were operating only 14 percent of the locker plants in 1935, were running 25 percent of the plants reporting on January 1, 1940. At the same time, plants devoted exclusively to locker service increased from 10 percent in 1935 to 21 percent at the close of 1939.

Table 5 shows the average capacity of the plants, grouped as in table 4. The most significant fact revealed by these data is the marked difference in the size of plants affiliated with meat markets in contrast with those operated with other enterprises or as separate units. The separate units are almost twice as large as those operated with retail meat markets. Thus, the small retail market installations have been an important factor in the apparent decline of locker-plant size.

The data in table 6 indicate that the percentage of locker capacity rented by separate plants opened during 4 out of the last 5 years equals or exceeds the percentage rented by meat markets, even though the average capacity of the former is almost twice that of the latter. Likewise, the larger plants installed by creameries and milk plants have as high, or a higher, percentage of their larger capacity rented as do those affiliated with meat markets.

It should be recognized that the larger the plant, the smaller the investment per locker of capacity and, hence, the lower the overhead. Further, the larger plants make more efficient use of processing equipment as well as of labor. Thus, unless offset by joint use of labor and facilities, the smaller plants installed by meat markets must necessarily have higher costs and

will, in the long run, have to charge higher service and rental rates than the larger ones or else depend partially on other sources of income. This difficulty would, of course, be accentuated by the smaller percentage of capacity rented by this group.

Another point which might be made at this time is that in some cases the existing enterprises which installed locker plants did so to attract an additional volume of business to the parent enterprise. In some cases the rental rates were exceedingly low, and no provision was made for processing service. Losses sustained in the locker department were assumed by the parent organization. This approach has in many cases resulted in price wars and questionable practices, either of which is harmful to the industry generally. Also, some plants have been installed merely to keep other individuals or groups from going into the business. These factors, probably, account for the unsatisfactory rental situation in some plants. No one can afford to indulge in this type of reasoning when considering the advisability of constructing a locker plant.

Table 4.- Number of Frozen-Food Locker Plants Reporting, by Affiliation and Years When Opened

Affiliated enterprise	Plants opened in -					Total
	1935 and prior	1936	1937	1938	1939	
<u>North Central States</u>						
Meat markets	5	6	23	90	87	211
Creameries	25	22	61	55	56	220
Ice and ice cream	23	18	30	25	24	120
Other	7	4	12	14	12	49
Separate	4	10	44	80	56	194
Unknown	2	4	3	17	23	49
Total	66	64	173	282	258	843
<u>Western States</u>						
Meat markets	14	8	9	20	22	73
Creameries	21	9	3	7	4	44
Ice and ice cream	14	6	5	5	4	34
Other	2	9	6	3	8	28
Separate	10	-	6	6	12	34
Unknown	5	2	2	6	8	23
Total	66	34	31	47	58	236
<u>United States 1/</u>						
Meat markets	19	14	32	111	113	289
Creameries	48	31	66	64	63	272
Ice and ice cream	42	28	43	44	48	205
Other	10	13	18	17	23	81
Separate	14	10	51	86	80	241
Unknown	7	6	5	23	31	72
Total	140	102	215	345	358	1,160

1/ United States total includes South Central, North Atlantic, and South Atlantic States, as well as North Central and Western States.

Table 5.- Average Capacity of 1,160 Frozen-Food Locker Plants, by Affiliation and Year When Opened

Affiliated enterprise	Plants opened in -					Total
	1935 and prior	1936	1937	1938	1939	
<u>North Central States</u>						
Meat markets	291	222	306	212	205	222
Creameries	442	356	327	334	258	327
Ice and ice cream	439	412	382	413	300	387
Other	357	528	285	293	253	310
Separate	378	412	430	391	407	406
Unknown	279	260	297	172	182	196
Average	412	372	356	306	270	319
<u>Western States</u>						
Meat markets	197	228	183	240	298	241
Creameries	358	265	413	255	193	312
Ice and ice cream	689	350	380	319	336	488
Other	584	284	299	172	320	307
Separate	572	-	589	551	564	569
Unknown	318	216	98	332	195	251
Average	430	274	333	298	338	346
<u>United States 1/</u>						
Meat markets	221	226	271	217	235	231
Creameries	395	329	328	328	262	325
Ice and ice cream	542	432	386	386	311	406
Other	387	359	290	271	289	309
Separate	517	412	447	402	438	431
Unknown	307	245	217	213	185	213
Average	423	350	354	308	295	330

1/ United States total includes South Central, North Atlantic, and South Atlantic States, as well as North Central and Western States.

Table 6.-- Percentage of Capacity Rented, on January 1, 1940, by 1,160 Frozen-Food Locker Plants, by Affiliation and Year When Opened

Affiliated enterprise	Percentage of space rented by plants opened in -					Total
	1935 and prior	1936	1937	1938	1939	
<u>North Central States</u>						
Meat markets	69.2	71.6	67.8	68.5	55.0	63.4
Creameries	62.5	77.4	69.4	68.0	51.2	65.2
Ice and ice cream	70.2	55.8	51.6	62.5	43.2	57.4
Other	44.3	41.2	61.2	70.0	47.8	55.3
Separate	85.7	73.2	72.7	70.7	44.1	63.9
Unknown	74.7	67.6	62.4	73.1	55.4	63.9
Average	65.6	66.0	66.4	68.7	49.1	62.6
<u>Western States</u>						
Meat markets	79.5	74.3	83.8	72.6	51.9	67.2
Creameries	89.2	89.5	93.1	91.6	68.6	88.8
Ice and ice cream	71.4	96.3	94.0	71.2	95.2	79.1
Other	91.6	76.2	84.0	82.6	41.9	70.1
Separate	79.5	-	83.1	64.4	39.7	63.7
Unknown	72.2	86.6	67.0	69.6	44.2	64.6
Average	79.4	84.3	86.3	72.9	49.4	72.5
<u>United States 1/</u>						
Meat markets	75.9	73.2	70.8	69.6	52.1	63.4
Creameries	73.3	80.2	71.0	69.9	53.9	69.1
Ice and ice cream	71.6	66.1	58.9	52.7	45.3	61.8
Other	57.6	60.4	69.0	71.4	41.9	58.9
Separate	30.9	73.2	74.8	70.1	43.9	63.2
Unknown	72.3	73.2	63.2	71.7	52.4	64.2
Average	72.7	71.1	69.2	68.9	48.1	64.0

1/ United States total includes South Central, North Atlantic, and South Atlantic States, as well as North Central and Western States.

Plant Capacity and Rentals, by Ownership and Year Opened

The data on locker-plant ownership (table 7) indicate that as of January 1, 1940, 47.2 percent of the plants were owned and operated by individuals, 22.3 percent by corporations, 16.3 percent by partnerships, and 13.8 percent by cooperatives. The balance, or 0.4 percent of those reporting did not state the type of ownership.

The large percentage of corporately owned locker plants among those opened during and prior to 1935 was due largely to the fact that corporations in the creamery, produce, ice and ice-cream

fields were among the first to install lockers as a means of attracting and holding additional patronage for the parent enterprise. Although the percentage of all plants opened by this group declined steadily during the next 4 years, there is some evidence to indicate that local corporations formed for the sole purpose of operating locker plants are increasing in importance.

Although there would seem to be little advantage in large-scale chain-type operation of locker plants in rural communities, local corporate ownership may have an advantage over individual ownership in that generally the group is likely to have more funds and be able to construct a more complete and efficient unit than the average individual. Further, such an organization, if locally owned, is less likely to have to meet competition of other plants built in the community.

Corporately owned plants were 27 percent larger than the average of all plants and almost twice as large as those owned by individuals. There was apparently no downward trend in the size or capacity of locker plants built by corporations during the 4 years, 1936-39.

The locker-rental analysis indicates that the corporately owned plants had 3 percent less than the average percentage of their locker capacity rented. This, of course, may be more than offset by the fact that they are operating much larger than average plants.

Cooperatively owned locker plants have increased from 6 percent of the plants operating during 1935 to 13.8 percent of those reporting on January 1, 1940. The capacity of plants in this group is 9 percent larger than the average of all plants and 35 percent larger than those individually owned. There is no evidence to indicate that the size of these plants is declining.

Among the plants opened during or prior to 1935, those which were cooperatively owned had 86.7 percent of their average capacity of 460 lockers rented, or 14 percent more than the average of all plants. The data on plants opened during 1936 display somewhat similar relationships, whereas the cooperatives opened during 1937, 1938, and 1939 had about an average percentage of their lockers rented. This material indicates that cooperatives may enjoy a long-run advantage in securing and holding patronage.

Individually owned plants display a downward trend in size which seems to be associated with the fact that most of the relatively large number of meat markets and grocery stores opening small locker departments during the last 3 years are owned by individuals.

The trend in the size of plants owned by partnerships, although downward, is not so marked as that of individually owned plants. Plants owned by partnerships, with an average capacity of 328 lockers, are only slightly smaller than the average but 23 percent larger than the individually owned plants.

In short, it appears from the data on rental records and capacities, ownership, and affiliation that the decline in size of plants has been not so much the result of unsuccessful operation of the larger plants but rather of the change in complexion of locker ownership and type of affiliated enterprises.

Table 7.- Relation of Ownership to Capacity and Rental Situation for Frozen-Food Locker Plants, 1935-39

Year opened	Percentage of plants owned by -					Total or average
	Individuals	Partnerships	Corporations	Cooperatives	Unknown	
	Percent	Percent	Percent	Percent	Percent	Percent
1935 or prior	42.2	10.7	40.0	6.4	0.7	100.0
1936	42.1	13.7	26.5	16.7	1.0	100.0
1937	43.7	16.3	21.9	18.1	-	100.0
1938	48.1	19.1	18.3	13.9	0.6	100.0
1939	52.0	16.5	18.1	13.1	0.3	100.0
Average	47.2	16.3	22.3	13.8	0.4	100.0
Average locker capacity of plants owned by -						
Year opened	Individuals	Partnerships	Corporations	Cooperatives	Unknown	Total or average
	Lockers	Lockers	Lockers	Lockers	Lockers	Lockers
1935 and prior	340	393	505	460	800	423
1936	266	432	423	378	400	350
1937	303	388	447	334	-	354
1938	244	271	452	397	151	308
1939	242	313	415	315	160	295
Average	266	328	450	359	332	330
Percentage of lockers rented by plants owned by -						
Year opened	Individuals	Partnerships	Corporations	Cooperatives	Unknown	Total or average
	Percent	Percent	Percent	Percent	Percent	Percent
1935 and prior	78.6	72.1	67.4	86.7	43.8	72.7
1936	71.2	63.6	65.6	81.7	95.0	71.1
1937	69.7	76.2	64.6	68.3	-	69.2
1938	69.4	70.1	67.3	69.1	67.5	68.9
1939	49.7	48.2	42.8	52.6	37.5	48.1
Average	64.8	65.0	61.0	67.4	59.8	64.0

Town Patronage of Locker Plants By Location, Size of Town,
and Age of Plants

The proportion of "town" or nonfarm patrons varies materially from one section to another. Thus, in table 8 the percentage of town patrons ranges from 63.1 percent in the two plants reporting from the South Atlantic divisions to 21.7 percent in the 567 plants reporting town patronage from the North Central division. A partial explanation for the relatively high percentage of town patrons in the South Central and South Atlantic States may be that the plants are located in larger towns.

When the North Central and Western divisions are compared, however, there is no great difference in size of towns (see table 9). In this case, the difference in the complexion of locker patronage may be the result of several factors: First, farmers in the North Central States may have more cash income with which to pay for service; second, farmers in this section may have more home-produced foods which lend themselves to frozen storage; third, locker plant operators in the North Central States have placed more emphasis on farm patronage. In other words, locker plants in this area may have been planned and organized in such a way as to meet the needs and fulfill the demands of farm families for processing services. Fourth, town families in the Western States may have a greater need for this type of service.

The data in table 8 do not indicate that the proportion of town patrons is higher or lower in the older plants. It seems that plants increase their volume or patronage in towns about as fast as they do in the country.

The average percentage of town patrons for the 773 plants reporting was 25.7 percent. This figure is likely to be biased upward by the fact that many of those failing to report had few or no town patrons. In other words, had all the plants reported on this item, the percentage of town patrons would have been somewhat lower.

Table 9 shows the percentage of the 773 plants reporting both town patronage and size of town which were located in towns of indicated size. Of the 773 plants used in this analysis, 567 were in the North Central States, 149 in the Western States, 38 in the South Central States, 17 in the North Atlantic, and only 2 in the South Atlantic States. These data indicate that the North Central and Western divisions had a larger percentage of plants in towns of less than 2,000 population than the South Central. Thus, whereas 53 percent of the plants in the North Central and Western divisions were located in towns of less than 2,000 population, only 18 percent of the plants in the South Central States were in towns of this size.

Table 10 shows the actual number of town patrons using lockers in the plants, grouped according to location and population of town. This figure should not be taken as an absolute measure, for many of these plants had not operated long enough to secure all their potential patronage. It does, however, provide some idea as to what patronage might be expected from the town families. These data also indicate a rather marked difference between sections in the number of town patrons using lockers. For example, the Western States, with 149 locker plants reporting town patronage, had an average of 95 town patrons in plants located in towns of 2,000 to 4,999 population; whereas, in the North Central States, the average was only 46. This may be partly because plants in the West were, on the average, somewhat larger and older than those in the North Central States and, therefore, had a larger number of lockers rented. However, this fact when considered in relation to the percentage figures indicates that there is a permanent difference between those areas which operators should reckon with in planning their plants.

Table 8.- Percentage of Total Patronage from Towns - Frozen-Food Locker Plants, Grouped According to Location and Year Plant Was Opened

Geographic division	Percentage of town patronage in plants opened in -					Total
	1935 and prior	1936	1937	1938	1939	
North Central	21.6	20.0	21.3	22.7	21.2	21.7
Western	34.3	28.3	35.3	34.8	38.9	34.4
South Central	30.7	40.7	43.0	32.1	50.8	44.0
North Atlantic	34.9	32.7	6.4	30.1	18.6	26.9
South Atlantic	-	-	-	-	63.1	63.1
United States	29.6	23.2	24.4	24.6	26.9	25.7

Table 9.-- Percentage of Frozen-Food Locker Plants Located in Towns,
by Geographic Division and Size of Town

Population of town	Percentage of plants in towns					United States Percent
	North Central States	Western States	South Central States	North Atlantic States	South Atlantic States	
	Percent	Percent	Percent	Percent	Percent	
Under 1,000	32.6	32.9	2.6	5.9	-	30.5
1,000-1,999	20.7	19.5	15.8	5.9	-	19.8
2,000-4,999	16.9	17.4	28.9	35.3	50.0	18.1
5,000-9,999	12.5	8.1	10.5	23.5	-	11.8
10,000 or more	12.4	18.1	42.2	29.4	50.0	15.4
Unknown	4.9	4.0	-	-	-	4.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 10.-- Average Number of Town Patrons for Frozen-Food Locker Plants,
by Geographic Division and Size of Town

Population of town	Plants located in towns					Average
	North Central States	Western States	South Central States	North Atlantic States	South Atlantic States	
Under 1,000	21	30	25	20	-	22
1,000-1,999	28	59	73	30	-	36
2,000-4,999	46	95	36	89	140	57
5,000-9,999	63	100	84	12	-	66
10,000 or more	98	184	99	178	24	120
Unknown	17	63	-	-	-	25
Average	41	82	73	90	82	52

Locker-Rental Rates

Annual rental rates reported varied to some extent according to convenience of the particular row of lockers (table 11). Of the 932 plants reporting annual rental rates for the bottom row of lockers, 53.4 percent were charging \$12 per year. The next group (16.2 percent) were charging \$10. In a large proportion of the plants, the bottom locker is of the drawer type and is, therefore, more convenient than those of the door type commonly used in the upper rows.

A charge of \$10 per year for the second row was being made by 51.8 percent of the plants, while only 21.3 percent were charging \$12 per year for this row. In the more recently equipped plants, the second row is also a drawer and usually rents at the same rate as the bottom row. This explains why about one-fifth of the plants were charging \$12 for the second row.

The third row is, with few exceptions, a door-type locker. Hence, it seemed logical to find that 64.9 percent of the 921 plants reporting charged \$10 per year for this row, while only 10 percent charged \$12. Usually the fourth and fifth rows rent for the same rate as the third row; 64.1 percent of the plants reporting charged \$10 per year for the third row, and 60.8 percent made the same charge for the fifth row.

Field observations indicate that there is a trend toward more gradation in rental rates by rows. To illustrate, the annual

Table 11.- Percentage of Frozen-Food Locker Plants Charging Various Annual Rental Rates for Each Row of Lockers, 1939

Locker row	Percentage of plants reporting rates of -							Plants report- ing Number
	Less than \$8	\$8	\$9	\$10	\$11	\$12	\$13 or more	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
Bottom	12.7	4.4	3.2	16.2	2.5	53.4	7.6	932
Second	12.3	4.6	4.1	51.8	1.7	21.3	4.2	920
Third	13.0	5.0	4.6	64.9	1.5	10.0	1.0	921
Fourth	14.0	6.1	4.5	64.1	1.4	9.5	0.4	907
Fifth	14.2	10.0	9.0	60.8	1.6	4.3	0.1	748
Sixth	23.6	13.5	10.7	48.9	0.4	2.5	0.4	280

rental rates might be: \$11 for a bottom drawer, \$12 for a second-row drawer (the most convenient of all), \$10 for a third-row door, \$9 for a fourth-row door, and \$8 for a fifth-row door. The average

charge in this case for the five lockers would be \$10. Such a graduated rental rate system would encourage locker use by a wider range of income groups in the community and would, therefore, add to the volume of business and increase the plant's income.

Several other points are to be considered, however: First, although a large percentage of the steel lockers have a capacity of approximately 6 cubic feet, some are larger and should, therefore, rent for more; second, some of the older plants have wooden lockers built at or near the plant which may be much larger than the regular locker and would, therefore, rent for higher rates; third, at some of the older plants locker-rental charges cover chilling and freezing for patrons. These conditions, however, are not common, hence the data in table 11 represent in general the rates being charged for lockers having a capacity of 5.5 to 6 cubic feet.

Analysis of the rental rates by geographic divisions reveals that in the Western States only 49.3 percent of the plants reporting charged \$10 or more per year for the bottom row of lockers; while, of those reporting from the North Central States, 84.8 percent were charging \$10 or more for the same row. Similar differences prevail among the rental rates on third-row lockers. On the other hand, 86 percent of the plants reporting from the South Central States were charging \$10 or more for the bottom row of lockers. Thus, the more recently developed areas are charging higher rates for lockers. The higher rates in the areas of newer development may be partly because the modern plants have more convenient and satisfactory facilities and, to some extent, because many of the older locker plants were installed as a means of attracting added business to an existing enterprise. In this case the return from locker rentals was not the primary objective. Lower rental rates in one plant tend to reduce rates, generally, in the surrounding area.

Of the plants in the North Central States, 50 percent charged \$1 per month for extra lockers, 4 percent charged more than \$1, 22 percent charged less than \$1, and 20 percent made no charge. Similar variations were found in other sections. The practice of providing extra lockers free is not advisable, but some operators began to do this during the early stages of the development and found it difficult to change. Because of additional bookkeeping and inevitable vacancies, the monthly charge for extra lockers should be more than one-twelfth of the annual rate. The rate of \$1 per month for fifth- or sixth-row lockers is usually more than the annual rental in these rows.

Only 65 percent of the 1,200 plants reporting indicated whether they were renting (other than extra lockers) lockers by the month. Of this group, 43 percent were charging \$1 per month,

15 percent \$1.25, 13 percent \$1.50, and 12 percent refused to rent by the month.

To refuse to rent lockers by the month is unwise because it may result in vacancies or inefficient utilization of plant capacity, particularly during the first 2 years of operation. Many people who would like to use a locker for a trial period are likely to take the locker for the balance of the year. The latter is particularly true if they are allowed to apply the high monthly rental paid to the regular yearly rental rate.

Charges for Cutting, Wrapping, and Freezing Services

Charges per pound for cutting, wrapping, and freezing meats are summarized in table 12. Of the plants reporting, 550, or 56 percent, charged 1 cent per pound; 283, or 29 percent, charged 1-1/2 cents per pound; 61, or 6 percent, charged 1-1/4 cents; and 5 percent charged less than 1 cent. The remaining 4 percent of the plants charged more than 1-1/2 cents per pound for this service.

Cutting, wrapping, and freezing rates varied somewhat between areas. Thus, although only 14 percent of the plants reporting from the Southern States charged 1 cent or less per pound for this service, 50 percent of the plants reporting from the Western States and 67 percent of those in the North Central States were charging 1 cent or less. This difference may be accounted for in part by the fact that, during the early development in the North Central and Western sections, locker-plant operators tried to cause patrons to break away from their custom of home cutting and wrapping by offering such service at a very low rate. Many plants began by charging only 50 cents per quarter for beef and \$1 for each hog carcass. In the shift to more equitable per pound charges, precedent and competition made it difficult to increase the rates to 1 cent or more per pound. Hence, a relatively large number of plants still charge low cutting rates in these older areas.

It should be pointed out that many of the plants that use the 1-1/2-cent rate also include grinding for this charge, whereas most plants using the 1-cent rate for cutting usually charge an extra cent per pound for grinding. The latter method gives the plant in gross slightly less than 1-1/4 cents per pound. The former method has the advantage of enabling the operator to make up the processing charge ticket as soon as the carcass is delivered and also eliminates the large number of small grinding items to be recorded. For these reasons the inclusive method of charging is becoming more popular throughout the Middle West.

In addition to the 980 plants reporting charges for cutting, wrapping, and freezing service, 174 plants stated that they did not provide this service at the plant. This was true of 20 percent of all plants reporting from the Western States and of 13 percent of those reporting from the North Central States. Of the

Table 12.- Charges for Cutting, Wrapping, and Freezing Meats, by Frozen-Food Locker Plants, 1939

Geographic division	Plants making specified charges per pound								Total
	Less than 1 cent	1 cent	1-1/4 cents	1-1/2 cents	1-3/4 cents	2 cents	Over 2 cents		
	Number	Number	Number	Number	Number	Number	Number	Number	Number
North Central	30	457	33	180	1	18	3	722	
Western	6	87	17	67	-	7	4	188	
South Central	2	5	1	35	-	7	2	52	
North Atlantic	4	1	10	-	-	-	-	15	
South Atlantic	-	-	-	1	-	2	-	3	
Total	42	550	61	283	1	34	9	980	
Percentage of total	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
	5	56	6	29	-	3	1	100	

174 plants which did no cutting, 50 percent were affiliated with creameries and produce plants and 20 percent with ice and ice-cream enterprises. It will be recalled that the ice and ice-cream plants were the first to enter the locker-service field when it was merely a matter of providing low-temperature storage without any sharp-freezing, chilling, or processing services. Many of these older plants are now adding facilities for more complete services.

Miscellaneous Service Charges

Miscellaneous services performed by some of the frozen-food locker plants include: slaughter of the livestock, grinding, curing and smoking meats, seasoning and packing sausage, rendering lard, and preparing fruits and vegetables for freezing and storage. The number of plants reporting such services as well as the number not rendering the services appear in table 13 along with the reported charges. Thus, 63 percent of the plants that were grinding meat for patrons charged 1 cent per pound; 17.7 percent made no charge (in which case it was included in the cutting, wrapping, and freezing charge); 224 plants, or one-fifth of the 1,179 plants reporting, stated that they did not render this service. The grinding charge of 1 cent per pound is almost universal. As mentioned earlier in the text, however, many plants have switched to the system wherein the cutting charge includes grinding because this simplifies both bookkeeping and collections.

Of the 507 plants which offered curing and smoking service, 31.1 percent charged 3 cents per pound; 29.1 percent charged 4 cents per pound; and 17.1 percent charged 5 cents. More than half the plants reporting, however, did not offer this service. Also, no doubt, many of the plants reporting charges did not own the facilities, but were having the work done elsewhere. From close observation it appears that this service attracts patronage and is profitable when well managed in a plant of average size or larger.

One-third of the 378 plants rendering lard charged 2 cents per pound for this service; one-fourth charged 3 cents per pound; 16.9 percent charged 1 cent; and 802 plants did not provide this service. Here again is a service which calls for a relatively small investment and which will attract much added patronage, particularly because many housewives are glad to be relieved of the rendering of lard at home. Prospective operators are reminded that lard-rendering facilities should, if possible, be so located that odors and steam do not permeate the cutting room and the patrons' lobby. Further, they might make some provision for storing lard in bulk at fixed rates per pound per month.

The charges for making sausage varied widely: 36.6 percent of the plants charged 1 cent per pound; 18.2 percent charged 2 cents; 11.6 percent, 3 cents; and 10.6 percent, 5 cents per pound. This wide variation is, no doubt, largely the result of differences in the types of service rendered. Thus, the lower charge may be for seasoning only, while the higher charges may include stuffing and smoking.

Fruit and vegetable processing charges also vary widely because of differences in the services rendered. In some plants the product is brought in ready for the freezer, while on the other extreme the plant may furnish sugar or salt solutions, cartons, and blanching service as well as freezing service. It seems remarkable in this connection that only a relatively small number of plants reported fruit and vegetable service. Thus, only 389 plants reported fruit and vegetable processing. Two-thirds of this group, or 261, were charging on a pound basis. No doubt many more plants handled minor quantities but did not make a service charge and, hence, did not report. Many operators declared that they were freezing only a few fruits and vegetables, but that they were encouraging this by "forgetting to charge" for the freezing service.

Only 502 plants, or less than half of all the plants reporting, did slaughtering on farms. Of the group that did farm slaughtering, 45 percent charged \$1 per hog, and 28.9 percent charged \$1.50. The most common charge for the average beef was \$1.50, while one-fifth of those reporting charged \$2 per head. Many added also mileage charges, and many plants charged higher rates for heavier animals.

Fifty-six plants, or 5 percent of all those reporting, were slaughtering at the plant. This is becoming more popular because it makes better use of the butcher's time, and is more convenient and more sanitary than farm slaughtering. Extension of this service has been inhibited by municipal ordinances which prohibit slaughtering within the town limits. On the other hand, many village councils have rescinded such ordinances in favor of the more sanitary meat supply, when operators agreed to obey certain rules regarding the disposal of offal and the handling of live-stock.

Table 13.- Percentage of Frozen-Food Locker Plants Reporting Service, by Type of Service and Charge Made

Unit charge (cents) ^{1/}	Percentage of plants reporting services that made specified charge							
	Grind-ing (pound)	Curing and smok-ing (pound)	Lard render-ing (pound)	Sausage (pound)	Fruits and vege-tables (pound)	Fruits and vege-tables (quart)	Slaughter on farms ^{1/}	
	Percent	Percent	Percent	Percent	Percent	Percent	Hogs (head)	Beef (head)
No charge	17.7	1.6	1.6	2.8	5.0	9.1	-	-
Less than 1	6.7	.6	2.4	2.2	7.0	1.5	2.6	.4
1	63.0	3.6	16.9	36.6	54.3	19.7	42.0	10.4
1 1/4	.5	-	.5	.6	.8	-	17.1	3.4
1 1/2	5.1	2.4	6.4	8.8	11.2	2.3	28.9	45.8
1 3/4	-	-	.3	-	-	-	2.7	4.6
2	6.1	7.1	33.3	18.2	12.0	40.9	5.7	21.2
2 1/2	.2	3.9	11.1	2.8	-	.8	.6	11.8
3	.7	31.1	25.1	11.6	3.9	8.3	.4	1.4
4	-	29.1	1.9	5.2	1.9	4.5	-	.8
5	-	17.1	.5	10.6	1.6	9.1	-	-
More than 5	-	3.5	-	.8	2.3	3.8	-	.2
Total percentage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Plants reporting- Service	Number	Number	Number	Number	Number	Number	Number	Number
No service	955 224	507 671	378 802	502 666	261 784	128 787	502 558	502 558

^{1/} Figures represent dollars instead of cents in the case of charges for slaughtering.

166.3 A U.S.
M68 Mi
no. 24 in t
cop. 2

601 1001
C.R.

GPO B-24232

S. S. R.



